

Mrd 12/21/01

10028100-122101

1. A method of processing data contained in a digital input image in the form of pixels, said method comprising a blocking artifact detection step (BAD) which artifacts originate from a block-based coding technique, said detection step comprising the sub-steps of:

- 5
- calculating a discontinuity value based on values of a current pixel and of pixels adjacent to said current pixel,
 - determining an artifact value of the current pixel from discontinuity values of the current pixel and of neighboring pixels of the current pixel,
 - identifying blocking artifacts from artifact values.

10

2. A data processing method as claimed in claim 1, characterized in that the calculation sub-step (CT) is adapted to detect a discontinuity if a value of a current pixel is different from a half-sum of a value of the pixel immediately preceding and from the value of the pixel immediately following the current pixel.

15

3. A data processing method as claimed in claim 1, characterized in that it furthermore comprises a gradient filter step (GF) of values (V) of the pixels, adapted to detect (THR) a natural contour area (NC) in the digital input image.

20

4. A data processing method as claimed in claim 3, characterized in that the gradient filtering utilizes a Sobel filter.

5. A data processing method as claimed in claim 3, characterized in that it furthermore comprises a low-pass filter step (LPF) of the values (Y) of the pixels coming from the blocking artifact detection step (BAD) with the exception of the pixels contained in the natural contour areas (NC) determined by the gradient filter step (GF, THIR).

25

6. A data processing method as claimed in claim 1, characterized in that the detection step (BAD) furthermore comprises the sub-steps of:

- storing (STO) a position in the image of blocking artifacts originating from the identification step (ID) in a table, and
- calculating (GRID) a position of a grid corresponding to the blocks of the coding technique blocks from a majority position of the block artifacts in the table.

5

7. A data processing method as claimed in claim 6, characterized in that the calculation sub-step (GRID) is adapted to determine a grid size from a larger value of the counter values representing a number of times that a distance occurs between a current vertical blocking artifact and a vertical blocking artifact immediately preceding it.

10

Art Unit: 3700

8. (Amended) A data processing method as claimed in claim 6, characterized in that the calculation sub-step (GRID) of the current size or of the current position of the grid for a current image is effected as a function of preceding sizes or positions of the grid determined for preceding images and as a function of a confidence parameter which represents the evolution of the values of said preceding sizes or positions.

9. (Amended) A computer program product for a television receiver comprising a set of instructions which, when they are loaded in a circuit of the television receiver, causes this circuit to carry out the data processing method as claimed in one of the claims 1.

10. (Amended) A computer program product for a decoder comprising a set of instructions which, when they are loaded in a circuit of said decoder, causes said circuit to carry out the data processing method as claimed in claim 1.